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REMARKS

In the Office Action dated 15 January 2003, claims 1-6, all claims currently pending in this application were rejected (claims 7-9 having been withdrawn). Applicants have amended claim 2 following the Examiner's kind suggestions. Claims 1-6 are submitted for reconsideration, as amended.

Claim 2 had been rejected under 35USC §112 and has been amended, *vide supra*.

Claims 1, 2, 4 and 5 had been rejected under 35 USC §102(b) as being anticipated by Frankosky et al., WO 91/09166 (also U.S. Patent No. 5,064,703). The Office has cited page 5, lines 1-20 and Examples 1-4.

Page 5, lines 1-12 of the reference is explicit in specifying the composition of the hydrophobic layer. Specifically, the recitation includes two different isophthalates (the meta isomer) which are NOT included in Applicants claims, especially claim 2. Applicants use the para-benzene dicarboxylic acid exclusively.

Example 3 of the reference recites a composition for copolyetherester elastomer (B) which is:

20.3% butanediol + terephthalic acid

7.9% butanediol + isophthalic acid

51.7% poly (tetramethylene ether) glycol ($M_w=2000$) + terephthalic acid

20.1% poly (tetramethylene ether) glycol (M_w2000) + isophthalic acid

This is not Applicants' composition as used in the claimed method.

The differences between Applicants' claimed method and the Frankosky et al. reference method are not trivial. Note paragraph [0034] wherein the melting point of Applicants' adhesive is specified as 157°C and a melt viscosity of 400 Pa at 190°C. Bostik 5178 has an mp. of 130°C (see attached) and the equivalent Griltex 6E has a melting range of 125-130°C.

Anticipation cannot be found when the claimed invention and the cited reference use different chemical composition having different properties.

Claim 3 had been rejected under 35 USC §103(a) over Frankosky et al. in view of Mahler, U.S. Patent No. 5,418,044 and Applicants' specification. The distinctions between Applicants' invention and Frankosky et al. have been noted. Mahler stands for the use of an adhesive to glue Sympatex® to a substrate without first coating the film. The example uses polyurethane adhesive. As stated in Applicant's specification, the combination falls apart on washing. Sympatex® cannot be glued directly to a substrate and especially not with an adhesive which violates bluesign ®standards,.

Claim 6 has been rejected for the use of known methods for applying adhesives. The claim does not depend for originality on the method of adhesive application.

Claims 1, 2 and 4-6 have been rejected over Horn, U.S. Patent No. 5,447,783 in view of Tanaka et al., U.S. Patent No. 4,130,603, Frankosky or the admitted prior art. Horn is described rightly as a Sympatex® analogue and it has been presumed that any of the Tanaka et al., Frankosky or the other prior art adhesives would be equivalent to the Applicants' claimed adhesive system. The adhesives are described rightly as "conventional" and are indeed the prior art to which Applicants refer in the specification.

Tanaka et al. have been selected as a specific example of the prior art adhesives. Tanaka et al. include a mixture of terephthalates and isophthalates in approximately equal amounts (c.f. Examples 1 and 2) with melting points of 120° (col. 4, line 2), 124, 121 and 127°C (col. 5, table). The comparisons used for testing peel strength bonded cotton to PET (col. 7, line 9-18). These conventional adhesives are not distinguishable from the Bostik 5178 or Giltex EMS 6D2-2. A

comparable Grilter adhesive is used in Applicants' comparative example to demonstrate failure.

The rejection is traversed.

Claim 3 has been rejected over the art cited in the previous rejection (Horn over Tanaka et al.) in further view of Mahler, U.S. Patent No. 5,418,044. Mahler teaches the use of a number of adhesives including polyurethane (Practical Example, col. 6, lines 56-57), copolyesters and copolyamides (col. 5, lines 66-67). Use of such adhesives may be practicable in some instances but is not truly wash resistant and violates the bluesign® concept of total recyclability which forms the basis and objective of this invention.

Claims 1-6 have been rejected over the admitted prior art in view of Horn or Frankosky. This rejection is cumulative and has been traversed previously in the discussion of Horn and Frankosky.

In view of the amendments and remarks above, Applicants submit that this case is in condition for allowance and request reconsideration and favorable action thereon.

Respectfully submitted,



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Enclosure: Bostik specification sheet; Griltex specification sheet; Priority Doc. No. DE 101 09 622.4

I hereby CERTIFY that this correspondence
is being deposited with the United States
Postal Service as first class mail in an
envelope address to: Commissioner
for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: April 15 2004

by: Jacqueline Beavers 

Material	Impact (ft-lb)	Tensile (psi)	Elongation (%)	Modulus (psi)	Hardness (Shore D)	Heat Deflection Temp. (°C)	Thermal Stability (°C)	Chemical Resistance	Electrical Properties	Mechanical Properties	Other Properties
E75	90	82	160,000 @ 180°C	115	Good	75	Low melt, good elongation	Low melt, good elongation	Low melt, good elongation	Low melt, good elongation	Low melt, good elongation
E85	100	90	150,000 @ 180°C	93	Excellent	88	Low melt, good elongation	Low melt, good elongation	Low melt, good elongation	Low melt, good elongation	Low melt, good elongation
E103	115	105	140,000 @ 215°C	115	Excellent	105	Low melt, good adhesion to ABS	Low melt, good adhesion to ABS	Low melt, good adhesion to ABS	Low melt, good adhesion to ABS	Low melt, good adhesion to ABS
E105	131	120	125,000 @ 215°C	132	Excellent	120	General purpose, automotive	General purpose, automotive	General purpose, automotive	General purpose, automotive	General purpose, automotive
E120	175	165	140,000 @ 215°C	180	Excellent	165	Very high temperature resistance	Very high temperature resistance	Very high temperature resistance	Very high temperature resistance	Very high temperature resistance
E165	125	N/A	400,000 @ 180°C	121	Fair	127	General purpose	General purpose	General purpose	General purpose	General purpose
A115	151	N/A	250,000 @ 180°C	143	Fair	140	Steam activatable, excellent dry clean resistance	Steam activatable, excellent dry clean resistance	Steam activatable, excellent dry clean resistance	Steam activatable, excellent dry clean resistance	Steam activatable, excellent dry clean resistance
A145	151	N/A	340,000 @ 180°C	163	Good	140	Dielectric activation, high temperature resistance	Dielectric activation, high temperature resistance	Dielectric activation, high temperature resistance	Dielectric activation, high temperature resistance	Dielectric activation, high temperature resistance
A150	110	N/A	150,000 @ 180°C	115	Good	88	Good performance, economical	Good performance, economical	Good performance, economical	Good performance, economical	Good performance, economical

5=Fabric, 6=Metal, 7=ABS, B=PVC, G=Polyolefin

Material Code: 1=Wood, 2=Paper, 3=Leather, 4=Urethane Foam,

Powder Form

Product	Polymer Type	Tensile Strength (psi)	Elongation (%)	Tensile Modulus (psi)	Impact Strength (ft-lb/inch)	Volume Resistance (ohm-cm)	Surface Resistance (ohms/sq.)	Dielectric Constant	Dielectric Loss	Melting Point (°C)	Density (g/cm³)	Thermal Stability (°C/hour)	Chemical Resistance	Other Properties
5109	Copolyester	75	65	100,000 @ 180 °C	65	88	Fair	Poor	55	1, 2, 3, 4, 5	Very low melt			
5121	Copolyester	130	124	40,000 @ 215°C	38	110	Good	Fair	125	1, 2, 4, 5	General purpose			
5154	Copolyester	112	90	55,000 @ 215°C	38	85	Good	Fair	60	1, 2, 4, 5	Low melt paste grade			
5155	Copolyester	115	105	70,000 @ 215°C	17	121	Good	Poor	105	1, 2, 4, 5	Low melt			
5157	Copolyester	155	145	55,000 @ 215°C	47	154	Excellent	Fair	150	1, 2, 4, 5	High temperature resistance			
5164	Copolyester	130	125	100,000 @ 215°C	22	127	Excellent	Good	120	1, 2, 4, 5	General purpose			
5178	Copolyester	125	125	90,000 @ 215°C	17	123	Excellent	Good	135	1, 2, 4, 5	General purpose			
5181	Copolyester	138	130	45,000 @ 215°C	39	115	Good	Poor	110	1, 2, 3, 4, 5	Excellent adhesion to polyester film			
5182	Copolyester	120	112	80,000 @ 215°C	22	127	Excellent	Good	115	1, 2, 3, 4, 5, B	Excellent wash resistance			
5183	Copolyester	120	115	335,000 @ 180 °C	35	145	Good	Excellent	150	1, 2, 4, 5, 6	Stream activatable, non-fogging			
5184	Copolyester	160	152	5,000 @ 200 °C	251	77	Poor	Poor	80	1, 2, 3	Low melt; Good adhesion to leather			
5185	Copolyester	90	N/A	325,000 @ 180 °C	37	141	Fair	Excellent	145	1, 2, 4, 5, 6	Steam activatable			
5216	Copolyamide	152	145								Adhesion to low energy surfaces			
5236	Copolyamide	152	145											
5253	Copolyamide	152	145											
5303	EVA	152	145											

5 = Fabric, 6 = Metal, 7 = ABS, 8 = PVC

Substrate Code: 1=Wood, 2=Paper, 3=Leather, 4=Urethane Foam.

PRODUCTS

HOTMELT ADHESIVES



COPOLYESTER for Technical Applications			Griltex[®] EMS
Product	Melting Range DSC [°C]	Melt Viscosity 160 °C/2.16kg ISO 1133 [Pa·s]	Melt Volume Rate 160 °C/2.16kg ISO 1133 [cm ³ /10 min]
<u>6E</u>	125-130	800	13
<u>9E</u>	118-123	350	30
<u>D 1309E</u>	145-155	120 (190°C)	90 (190°C)
<u>D 1365E</u>	98-107	450	23
<u>D 1377E</u>	150-160	300 (190°C)	35 (190°C)
<u>D 1439E</u>	120-130	800	13
<u>D 1441E</u>	120-130	180	60
<u>D 1442E</u>	105-115	650	16
<u>D 1502E</u>	180-190	100 (210°C)	105 (210°C)
<u>D 1519E</u>	120-130	1200	9
<u>D 1531E</u>	75-85	300	35
<u>D 1533E</u>	140-150	30 (190°C)	350 (190°C)
<u>D 1539E</u>	118-123	100	105
<u>D 1582E</u>	75-85	80	130
<u>D 1616E</u>	85-95	1000	11
<u>D 1619E</u>	115-120	1100	10
<u>D 1655E</u>	185-195	40 (210°C)	265 (210°C)

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Griltex 6E**Copolyester Schmelzkleber
Copolyester Hotmelt Adhesive****Technisches Merkblatt
Technical Data Sheet**

Schmelzbereich Melting range	DSC	[°C]	125-130
Schmelzviskosität Mittelwert Melt viscosity average	DIN/ISO 1133 2.16 kg/160 °C	[Pa·s]	800
Schmelzvolumenindex (MVR) Mittelwert Melt volume rate (MVR) average	DIN/ISO 1133 2.16 kg/160 °C	[cm³/10 min]	13
Gravurwalzentemperatur Temperature of engraved rolls	Pulverbeschichtung Powder Coating	[°C]	55-65
Fugentemperatur Glue-line temperature		[°C]	140-170
Druck (pneumatischer Förderdruck in einer Durchlaufpresse) Pressure (pneumatic fusing pressure in a flow-through press)		[N/cm²]	3.0-5.0
Zeit (Presse) Time (Press)		[s]	12-20
Chemische Reinigungsbeständigkeit Resistance to dry cleaning			gut good
Waschbeständigkeit Resistance to laundry		[°C]	75

Alle Messungen wurden an getrocknetem Material durchgeführt.
All measurements have been taken at dried material.

Lieferform/Availability

GF = Granulat (Wassergehalt < 0.5 %) in Papier-/Alu-Säcken à 25 kg
Granules (Water content < 0.5 %) in Paper/Alu bags 25 kg each
P = Pulver (Wassergehalt < 1.0 %) in Papier-/PE-Säcken à 20 kg
Powder (Water content < 1.0 %) in Paper/PE-bags 20 kg each

Die Verpackungen sind stofflich gekennzeichnet und rezyklierbar, siehe Sonderbroschüre
Wrapping materials can be recycled.

Die vorliegenden Daten und Empfehlungen entsprechen dem heutigen Stand unserer Kenntnisse, sind jedoch ohne
Verbindlichkeit/All data and recommendations are based on our present knowledge but are given without guarantee

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